

METHOD OF FABRICATING CARBON NANOTUBE FIELD EMISSION SOURCE

Abstract

5 A method of transferring imprint carbon nano-tube (CNT) field
emitting source is disclosed. Firstly, cathode lines are screen printed on a
substrate. Then a dielectric layer formation on the cathode lines and
substrate is followed. Afterward, gate lines formed on the dielectric layer
by screen printing are performed. Next a patterning process is carried out
10 to form openings. Subsequently, an imprint negative mold is dipped with
CNT paste and imprinted the CNT paste on the cathode lines through the
openings. After drawing of pattern from the imprint mold, the CNT paste
is cured by annealing. Since the emitting sources are formed through the
imprint negative mold, as a result, the size and shape can be
15 predetermined. Moreover, the intervals between gate line and the
emitting source are readily control, which resolve the circuit short
problem between gate and cathode. Consequently, the current density,
brightness, and uniformity of the emitter sources are significantly
improved.

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